

ABSTRACT

A perpendicular magnetic recording medium having compatibility between low noises and high thermal
5 stability is provided. In the present medium having at least an underlayer, a magnetic recording layer, a protective layer and a lubricant layer sequentially stacked on a nonmagnetic substrate, the underlayer is composed from at least one element selected from Ru, Rh,
10 Os, Ir and Pt, the magnetic recording layer has a granular structure, and its composition is $\text{Co}_{100-a-b-c}\text{Pt}_a\text{Cr}_b\text{B}_c)_{100-d}\text{M}_d$ (M is an oxide or a nitride of at least one element of Cr, Al, Ti, Si, Ta, Hf, Zr, Y and Ce, and a, b, c and d meet the condition of $0 < a \leq 40$, $2 \leq b \leq 12$, $0.5 \leq c$
15 ≤ 5 and $4 \leq d \leq 12$). A soft magnetic backing layer 2 and a seed layer 3 may be formed between the nonmagnetic substrate and the underlayer.